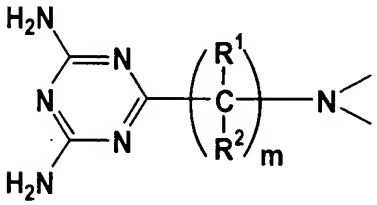
CLAIMS

1. A polyacetal resin composition comprising a polyacetal resin, an antioxidant, and a guanamine compound having at least one unit represented by the following formula (1):

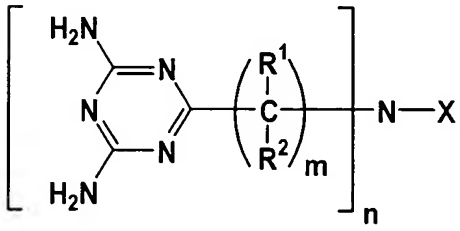


(1)

wherein R^1 and R^2 are the same or different and each represents a hydrogen atom or an alkyl group; and "m" denotes an integer of not less than 2,

or a salt of the guanamine compound.

2. A polyacetal resin composition according to claim 1, wherein the guanamine compound comprises a compound represented by the following formula (2):



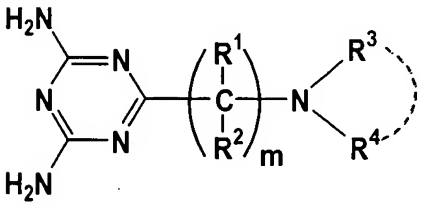
(2)

wherein the unit -N-X represents an ammonia or amine residue, "n" denotes an integer of 1 to 6, and R^1, R^2 and "m" have the same meanings defined above.

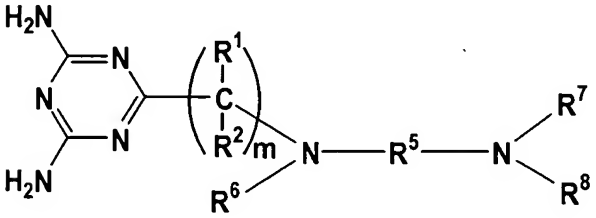
3. A polyacetal resin composition according to claim 2, wherein the amine residue represented by the unit -N-X is a residue of an amine compound, a urea compound,

an amide compound, an imide compound or a hydrazine compound in the formula (2).

4. A polyacetal resin composition according to claim 1, wherein the guanamine compound is represented by the following formula (3) or (4):

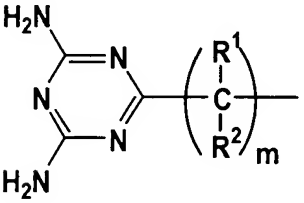


(3)

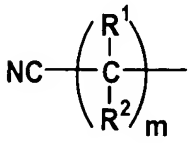


(4)

wherein R^3, R^4, and R^6, R^7 and R^8 are the same or different and each represents a hydrogen atom, an alkyl group, a cycloalkyl group, an aryl group, an aralkyl group, a carboxyalkyl group, an alkoxycarbonylalkyl group, an aryloxycarbonylalkyl group, or a guanamylalkyl group or cyanoalkyl group represented by the following formula (5a) or (5b):

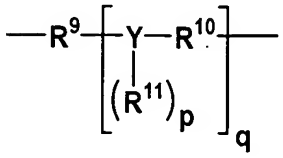


(5a)



(5b)

R^3 and R^4 may bond together with an adjacent nitrogen atom to form a hetero ring; R^5 represents an alkylene group, a divalent alicyclic group, a divalent aromatic group, or a divalent group represented by the following group (6):



(6)

wherein R^9 and R^{10} are the same or different and each represents an alkylene group, and R^{11} represents a hydrogen atom, a guanamylalkyl group of the formula (5a) or a cyanoalkyl group of the formula (5b), "Y" represents an oxygen atom or a nitrogen atom, "p" denotes 0 when "Y" is an oxygen atom and "p" denotes 1 when "Y" is a nitrogen atom, "q" denotes an integer of not less than 1;
R^1, R^2 and "m" have the same meanings defined above.

5. A polyacetal resin composition according to claim 1, wherein the guanamine compound has an imidazole residue.

6. A polyacetal resin composition according to claim 1, wherein the antioxidant comprises a hindered phenol-series compound and/or a hindered amine-series compound.

7. A polyacetal resin composition according to claim 1, which comprises 0.001 to 5 parts by weight of the antioxidant and 0.001 to 10 parts by weight of the guanamine compound or the salt thereof relative to 100 parts by weight of the polyacetal resin.

8. A polyacetal resin composition according to claim 1, which further comprises at least one member selected from the group consisting of a processing stabilizer and a heat stabilizer.

9. A polyacetal resin composition according to claim 8, wherein the processing stabilizer comprises at least one member selected from the group consisting of a long-chain fatty acid or a derivative thereof, water and/or an alcohol, an organosiloxane, a fluorine-containing compound and a wax, and

the heat stabilizer comprises at least one member selected from the group consisting of a basic nitrogen-containing compound, a metal salt of an organic carboxylic acid, an alkali or alkaline earth metal compound, a hydrotalcite, a zeolite and an acidic compound.

10. A polyacetal resin composition according to claim 9, wherein the basic nitrogen-containing compound comprises at least one member selected from the group consisting of biurea, allantoin, a metal salt of allantoin, a carboxylic acid hydrazide and a polyamide resin.

11. A polyacetal resin composition according to claim 9, wherein the basic nitrogen-containing compound is a carboxylic acid hydrazide or in the form of a resin master batch containing the carboxylic acid hydrazide, and the carboxylic acid hydrazide comprises at least one member selected from the group consisting of an aliphatic carboxylic acid hydrazide, and an aromatic carboxylic acid

hydrazide.

12. A polyacetal resin composition according to claim 9, wherein the acidic compound is at least one member selected from the group consisting of a boric acid compound, a nitrogen-containing cyclic compound having a hydroxyl group, a carboxyl group-containing compound, a (poly)phenol, and an aminocarboxylic acid.

13. A polyacetal resin composition according to claim 8, which comprises 0.01 to 5 parts by weight of the processing stabilizer and/or 0.001 to 5 parts by weight of the heat stabilizer relative to 100 parts by weight of the polyacetal resin.

14. A polyacetal resin composition according to claim 1, which further comprises at least one additive selected from the group consisting of a weather (light)-resistant stabilizer, a coloring agent, a gloss control agent, an impact resistance improver, an agent for improving sliding property, and a filler.

15. A polyacetal resin composition according to claim 14, wherein the weather (light)-resistant stabilizer comprises at least one compound selected from the group consisting of a benzotriazole-series compound, a benzophenone-series compound, an aromatic benzoate-series compound, a cyanoacrylate-series compound, an oxalic anilide-series compound, and a hindered amine-series compound, and the coloring agent comprises a carbon black.

16. A polyacetal resin composition according to

claim 14, wherein the contents of the weather (light)-resistant stabilizer and the coloring agent are 0.01 to 5 parts by weight respectively, relative to 100 parts by weight of the polyacetal resin.

17. A process for producing a polyacetal resin composition which comprises mixing a polyacetal resin, an antioxidant and a guanamine compound or a salt thereof recited in claim 1.

18. A polyacetal resin-shaped article formed from a polyacetal resin composition recited in claim 1.

19. A polyacetal resin-shaped article according to claim 18, wherein, when the article is maintained in a closed space for 24 hours at a temperature of 80°C, the amount of formaldehyde generated from the article is not more than 1.5 μg per 1 cm^2 of surface area of the article.

20. A polyacetal resin-shaped article according to claim 18, wherein, when the article is maintained in a closed space for 3 hours at a temperature of 60°C under a saturated humidity, the amount of formaldehyde generated from the article is not more than 2.5 μg per 1 cm^2 of surface area of the article.

21. A polyacetal resin-shaped article according to claim 18, which is at least one member selected from the group consisting of an automotive part, an electric·electronic device part, an architectural·pipeline part, a household utensil·cosmetic article part, a medical device part, and a photographic

part.

22. A process for producing a polyacetal resin-shaped article, which comprises molding a polyacetal resin composition recited in claim 1.